

IN THE CLAIMS:

B₂ 1. (Amended) An electrical cable having a local longitudinal axis and comprising:

a central conductor structure comprising

an electrically conducting central conductor,

a layer of a central conductor insulation overlying the central conductor,

and

an electrically conducting central conductor shield overlying the layer of central conductor insulation;

a plurality of spiral conductor structures overlying and spirally wrapped around the central conductor structure, wherein each spiral conductor structure retains a same pair of circumferentially adjacent spiral conductor structures along a length of the electrical cable, and wherein each of the spiral conductor structures comprises

an electrically conducting spiral conductor, and

a spiral conductor insulation overlying the spiral conductor,

wherein each the spiral conductor structure having structures have no electrically conducting shielding [thereon], wherein at least some of the spiral conductor structures have different signal-carrying identities, and wherein at least some of the spiral conductor structures having different signal-carrying identities are arranged responsive to a crosstalk threat between the various spiral conductor structures;

an electrically conducting outer shield overlying the plurality of spiral conductors; and

an outer insulation overlying the electrically conducting outer shield.

2. (Original) The electrical cable of claim 1, wherein the electrical cable is substantially circular viewed in cross section perpendicular to the local longitudinal axis.

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3. (Original) The electrical cable of claim 1, wherein the central conductor comprises a plurality of electrically conducting central conductor wires.

4. (Original) The electrical cable of claim 1, wherein the central conductor is a coaxial wire structure.

5. (Original) The electrical cable of claim 1, wherein each spiral conductor comprises a plurality of electrically conducting spiral conductor wires.

6. (Original) The electrical cable of claim 1, wherein the plurality of spiral conductor structures are each of substantially the same diameter.

7. (Original) The electrical cable of claim 1, wherein at least some of the plurality of spiral conductor structures are of different diameters.

8. (Canceled)

9. (Original) The electrical cable of claim 1, wherein each spiral conductor structure has a designated identity, and wherein a circumferential arrangement of each spiral conductor structure is selected responsive to its designated identity and to the designated identities of each of a pair of circumferentially adjacent spiral conductor structures.

10. (Original) The electrical cable of claim 1, further including a spiral spacer structure spirally wrapped around the central conductor structure, the spiral spacer structure lying between two spiral conductor structures in a side-by-side relationship.

11. (Amended) An electrical cable having a local longitudinal axis and comprising:

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a central conductor structure comprising
an electrically conducting central conductor,
a layer of central conductor insulation overlying the central conductor,
and
an electrically conducting central conductor shield overlying the layer of
central conductor insulation;
a plurality of spiral conductor structures overlying and spirally wrapped around
the central conductor structure, wherein at least one of the spiral conductor structures
has a signal-carrying identity and wherein each of the spiral conductor structures
comprising comprises
an electrically conducting spiral conductor, and
a spiral conductor insulation overlying the spiral conductor, wherein
each spiral conductor structure has no electrically conducting
shielding thereon, and wherein
each spiral conductor structure retains a same pair of
circumferentially adjacent spiral conductor structures along a length of the electrical
cable, wherein
each spiral conductor structure has a designated identity,
and wherein
a circumferential arrangement of each spiral conductor
structure is selected responsive to its designated identity and to the designated identities
of each of the pair of circumferentially adjacent spiral conductor structures;
an electrically conducting outer shield overlying the plurality of spiral
conductors; and
an outer insulation overlying the electrically conducting outer shield, wherein
the electrical cable is substantially circular viewed in cross section perpendicular to the
local longitudinal axis.

12. (Original) The electrical cable of claim 11, wherein the central conductor
comprises a plurality of electrically conducting central conductor wires.

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13. (Original) The electrical cable of claim 11, wherein each spiral conductor comprises a plurality of electrically conducting spiral conductor wires.

14. (Original) The electrical cable of claim 11, wherein the plurality of spiral conductor structures are each of substantially the same diameter.

15. (Original) The electrical cable of claim 11, wherein at least some of the plurality of spiral conductor structures are of different diameters.

16. (Original) The electrical cable of claim 11, further including a spiral spacer structure spirally wrapped around the central conductor structure, the spiral spacer structure lying between two spiral conductor structures in a side-by-side relationship.

17. (Amended) A method of preparing an electrical cable, comprising the steps of providing a central conductor structure comprising an electrically conducting central conductor, a layer of central conductor insulation overlying the central conductor, and

an electrically conducting central conductor shield overlying the layer of central conductor insulation;

providing a plurality of spiral conductor structures each having a designated identity and comprising

an electrically conducting spiral conductor, and

a spiral conductor insulation overlying the spiral conductor,

each spiral conductor structure having no electrically conducting shielding thereon;

selecting a circumferential arrangement of each spiral conductor structure responsive to its designated identity and to the designated identities of each of a pair of circumferentially adjacent spiral conductor structures, wherein the step of selecting includes the step of arranging the spiral conductor structures responsive to a power

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carried by each spiral conductor structure and responsive to the power carried by the circumferentially adjacent pair of spiral conductor structures;

wrapping the spiral conductor structures around the central conductor structure in a spiral pattern, each spiral conductor structure retaining the same pair of circumferentially adjacent spiral conductor structures along a length of the electrical cable;

placing an electrically conducting outer shield overlying the spiral conductor structures that are wrapped onto the central conductor structure; and

placing an outer insulation overlying the outer shield to form the electrical cable having a local longitudinal axis.

18. (Original) The method of claim 17, wherein the plurality of spiral conductor structures are each of substantially the same diameter.

19. (Original) The method of claim 17, wherein at least some of the plurality of spiral conductor structures are of different diameters.

20. (Original) The method of claim 17, wherein the electrical cable is substantially circular viewed in cross section perpendicular to the local longitudinal axis.

21-23. (Canceled)

24. (Amended) The electrical cable of claim 1, wherein at least some of the spiral conductor structures have an identity selected responsive to a designed carried signal selected from the group consisting of a video signal, an audio signal, ~~a power signal~~, a telephone signal, a data signal, and a control signal.

25. (Previously Added) The electrical cable of claim 1, wherein the electrical cable is a signal-carrying component of an in-flight entertainment system.

26. (Cancel)

27. (Amended) ~~The method of claim 17~~ A method of preparing an electrical cable, comprising the steps of
providing a central conductor structure comprising
an electrically conducting central conductor,
a layer of central conductor insulation overlying the central conductor,
and
an electrically conducting central conductor shield overlying the layer of
central conductor insulation;
providing a plurality of spiral conductor structures each having a designated
identity and comprising
an electrically conducting spiral conductor, and
a spiral conductor insulation overlying the spiral conductor,
each spiral conductor structure having no electrically conducting shielding thereon;
selecting a circumferential arrangement of each spiral conductor structure
responsive to its designated identity and to the designated identities of each of a pair of
circumferentially adjacent spiral conductor structures, wherein the step of selecting
includes the step of arranging the spiral conductor structures responsive to a crosstalk
characteristic thereof;
wrapping the spiral conductor structures around the central conductor structure
in a spiral pattern, each spiral conductor structure retaining the same pair of
circumferentially adjacent spiral conductor structures along a length of the electrical
cable;
placing an electrically conducting outer shield overlying the spiral conductor
structures that are wrapped onto the central conductor structure; and
placing an outer insulation overlying the outer shield to form the electrical cable
having a local longitudinal axis.

28. (Previously Added) The method of claim 17, wherein at least some of

the spiral conductor structures have an identity selected responsive to a designed carried signal selected from the group consisting of a video signal, an audio signal, a power signal, a telephone signal, a data signal, and a control signal.

29. (Amended) An electrical cable having a local longitudinal axis and comprising:

a central conductor structure comprising

an electrically conducting central conductor,

a layer of a central conductor insulation overlying the central conductor,

and

an electrically conducting central conductor shield overlying the layer of central conductor insulation;

a plurality of spiral conductor structures overlying and spirally wrapped around the central conductor structure, each of the spiral conductor structures comprising

an electrically conducting spiral conductor, and

a spiral conductor insulation overlying the spiral conductor,

wherein each spiral conductor structure is unshielded ~~having no electrically conducting shielding thereon,~~

wherein each of the spiral conductor structures has a designated identity, and wherein at least a first one of the spiral conductor structures has two circumferentially adjacent spiral conductor structures each having a different identity than the first one of the spiral conductor structures;

an electrically conducting outer shield overlying the plurality of spiral conductors; and

an outer insulation overlying the electrically conducting outer shield.

30. (Amended) An electrical cable having a local longitudinal axis and comprising:

a central conductor structure comprising

an electrically conducting central conductor,

a layer of a central conductor insulation overlying the central conductor,
and

an electrically conducting central conductor shield overlying the layer of
central conductor insulation;

a plurality of spiral conductor structures overlying and spirally wrapped around
the central conductor structure, wherein a circumferential positioning of the spiral
conductor structures relative to each other is responsive to a signal carried by each
spiral conductor structure, and wherein each of the spiral conductor structures
comprises

an electrically conducting spiral conductor, and

a spiral conductor insulation overlying the spiral conductor,

wherein each spiral conductor structure is unshielded ~~having no electrically conducting
shielding thereon;~~

an electrically conducting outer shield overlying the plurality of spiral
conductors; and

an outer insulation overlying the electrically conducting outer shield.

31. (Previously Added) The electrical cable of claim 30, wherein each spiral
conductor structure retains a same pair of circumferentially adjacent spiral conductor
structures along a length of the electrical cable.

32. (Previously Added) The electrical cable of claim 30, wherein each spiral
conductor structure retains a same pair of circumferentially adjacent spiral conductor
structures along a length of the electrical cable, and wherein the same pair of
circumferentially adjacent spiral conductor structures is selected according to the signal
carried by each of the three spiral conductor structures.

33. (Previously Added) The electrical cable of claim 30, wherein at least
some of the spiral conductor structures have an identity selected responsive to a
designed carried signal selected from the group consisting of a video signal, an audio

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signal, a power signal, a telephone signal, a data signal, and a control signal.
